

## CLAIMS

[1] A temperature sensor comprising:  
a bottomed tubular holder having an opening;  
a temperature detecting device, contained in a bottom part of the  
holder, having a lead pair connected thereto so as to be introduced from  
the opening side;

a filler resin part filling the holder so as to seal the temperature  
detecting device and extending to the opening; and

a sensor cover integrated with a cap part covering the whole  
opening and a neck part extending to the outside of the cap part along an  
outer peripheral face of the lead pair drawn out of the cap part.

[2] A temperature sensor according to claim 1, further comprising a  
guide part, projecting from an edge of the opening in the holder, for  
guiding leads constituting the lead pair;

wherein the sensor cover covers the guide part.

[3] A temperature sensor according to claim 2, wherein the guide  
part has a T-shaped form including a part extending in a direction  
perpendicular to an extending direction of the holder and a part extending  
parallel to the extending direction of the holder.

[4] A temperature sensor according to claim 1, wherein an edge of  
the opening of the holder is formed with a substantially annular hook part  
projecting to the outside of the holder; and

wherein the hook part engages at least a part of the sensor cover.

[5] A temperature sensor according to claim 1, wherein the sensor  
cover is formed by hot melt molding.

[6] A temperature sensor according to claim 1, further comprising a

sensing part to be dipped into a fluid in a case to be subjected to temperature measurement;

wherein the sensing part contains the temperature detecting device having the lead pair connected thereto, the temperature detecting device being covered only with a device protecting part made of a resin.

[7] A temperature sensor according to claim 6, wherein the device protecting part has a laminate structure constituted by different kinds of resins.

[8] A temperature sensor according to claim 6, wherein the device protecting part has a laminate structure constituted by the same kind of resins.

[9] A temperature sensor according to claim 6, wherein the holder is constituted by a resin; and

wherein the device protecting part is constituted by the holder and the filler resin part filling the holder.

[10] A temperature sensor according to claim 6, wherein the device protecting part contains a polyphenylene sulfide resin as a constituent material.